

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

**Attorney Docket No.: 15272US02**

In the Application of:	)	
	)	
Gaikwad, et al.	)	<b><u>Electronically Filed On September 23, 2010</u></b>
	)	
Serial No.: 10/817,094	)	
	)	
Filed: April 2, 2004	)	
	)	
For: RSSI SLOPE CALIBRATION	)	
TECHNIQUE	)	
	)	
Examiner: Lu, Zhiyu	)	
	)	
Group Art Unit: 2618	)	
	)	
Confirmation No.: 2127	)	

**REPLY BRIEF**

Mail Stop Appeal Brief – Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

    This Paper responds to the Examiner's Answer mailed August 3, 2010. The Applicants respectfully request that the Board of Patent Appeals and Interferences reverse the final rejection of claims 1-7 and 9-23 of the present application for at least the reasons set forth in the Appeal Brief and this Reply Brief.

## REMARKS

### I. The Proposed Combination Of Su And Adams Does Not Render Claims 1-5, 10, 12, 14-19, 22, And 23 Unpatentable

#### A. Independent Claim 1

1. **“adjusting the operation of the receiver portion based upon the first signal power measurement and the second signal power measurement”**

The Examiner’s Answer asserts that “Su clearly discloses a calibration scheme for adjusting receiver gain (column 2 lines 35-48), wherein multiple power measurements are conducted.” *See* Examiner’s Answer at page 12.

However, Su at column 2, lines 35-48 states the following:

A calibration method and apparatus are described. In one embodiment, the method includes a pair of transceivers performing **a loop back test to determine a relationship between transmit and receive gain for each transceiver**. A path loss between the first transceiver and a second transceiver is computed. The computation is made by transmitting a pair of signals in opposite directions between the first and second transceivers to **determine a relationship between transmit path gain of the first transceiver and receive path gain of the second transceiver and a relationship between the transmit path gain of the second transceiver and receive path of the first transceiver**. The transmit and receive path gains are generated for the first transceivers based on the path loss and the relationship.

*See* Su at column 2, lines 35-48 (emphasis added). As shown above, Su discloses a “loop back test to determine a relationship between transmit and receiver gain for each transceiver.” Path loss between the transceiver is computed. Signals are transmitted in opposite directions to determine relationships between transmit path gain and receive path gain.

The Examiner’s Answer also cites Su at column 9, lines 62-65. *See* Examiner’s Answer at page 13. However, this portion of Su states that the “gain and power level control signals control the gains of both the receive and transmit paths as well as the transmitter power level based on the results of the calibration described above.” *See* Su at column 9, lines 62-65. Notably, this portion of Su indicates that transmit and receive gain paths as well as transmitter

power level are controlled by control signals. It does not, however, describe, teach, or suggest adjusting operation of a **receiver** based on **multiple power measurements**.

Despite the conclusory assertions in the Examiner's Answer, there is nothing in the cited portions, nor the remainder, of Su that describes, teaches, or suggests **adjusting operation** of a **receiver** based on **multiple power measurements**. That is, Su does not describe, teach or suggest "adjusting the operation of the receiver portion based upon the first signal power measurement and the second signal power measurement," as recited in claim 1.

The Office Action cites to nothing that describes, teaches, or suggests such a limitation. While the Office Action provides a series of unsupported conclusions drawn from isolated sections of Su, the Office Action provides no concrete evidence that describes, teaches, or suggests "**adjusting the operation of the receiver portion** based upon the **first signal power measurement and the second signal power measurement**," as recited in claim 1.

The Federal Circuit has stated that "rejections on obviousness **cannot be sustained with mere conclusory statements**; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *See* MPEP at § 2142, citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), and *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval) (emphasis added).

"[T]he Board cannot simply reach conclusions based on its own understanding or experience – or on its assessment of what would be basic knowledge or common sense. Rather, the Board **must point to some concrete evidence** in the record in support of these findings." *See In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001).

As explained in the Appeal Brief at pages 7-8 and above, the Examiner's Answer, much like the Final Office Action, does not provide any concrete evidence to support the conclusion that Su describes, teaches, or suggests "**adjusting the operation of the receiver portion** based upon the **first signal power measurement and the second signal power measurement**," as recited in claim 1. Accordingly, the Applicants respectfully submit that a *prima facie* case of obviousness has not been established with respect to claim 1 and the claims that depend therefrom.

**2. “wherein the adjusting comprises modifying at least one threshold related to processing of receive signal strength indicator data used in the operation of the radio frequency communication system”**

The Examiner’s Answer states that “[d]espite appellant’s argument on differentiating ‘setpoint’ from ‘threshold’, appellant neither defines the term ‘threshold’ nor specifically limits operation and/or objective of ‘threshold’ modifications in the claims.” *See* Examiner’s Answer at page 13.

However, the Applicants explain the known difference between a “setpoint” and a “threshold” in the Appeal Brief at page 9. **Indeed, the Applicants provide definitions from the Comprehensive Dictionary of Electrical Engineering** that differentiate the terms and demonstrate that the Final Office Action and the Examiner’s Answer subjective equating of the terms is in error. *See id.* A person of ordinary skill in the art would clearly understand the difference between a “setpoint” and a “threshold,” as evident by the definitions of the terms in the Comprehensive Dictionary of Electrical Engineering, for example.

Moreover, while the Examiner’s Answer points to Adams at “Fig. 7, column 11 line 60 to column 12 line 11, column 12, line 65 to column 13 line 3” as allegedly disclosing “modifying,” these portions of Adams merely disclose **comparing** the “respective received signal strength measurement” to its respective setpoint.

Thus, while Adams discloses **comparing** a signal strength measurement to its respective **setpoint**, Adams does not describe, teach or suggest “wherein the adjusting comprises **modifying** at least one **threshold** related to processing of receive signal strength indicator data used in the operation of the radio frequency communication system,” as recited in claim 1, for example. Thus, for at least these additional reasons, the Applicants respectfully submit that a *prima facie* case of unpatentability has not been established with respect to claim 1 and the claims that depend therefrom.

**B. Independent Claims 15 And 23**

As explained in the Appeal Brief and above in Section I.A.1. with respect to claim 1, a *prima facie* case of unpatentability has not been established with respect to claims 15, 23 and the claims that depend therefrom.

**C. Claim 2**

The Examiner's Answer continues to rely on Su at column 4, lines 9-16 as disclosing "wherein the arranging, taking, configuring, performing, and adjusting occur on a periodic basis," as recited in claim 2.

However, the relevant portion of Su that the Examiner's Answer relies upon states the following:

The technique described here allows the transmitter gain, receiver gain, and path loss to be determined in real-time in a closed loop-control scheme with each transmitter in the wireless system adjusting its output power level to a predetermined power level. In one embodiment, the real-time gain and path loss calibration scheme can determine the gain and path loss of a wireless system during network establishment and at periodic intervals during regular operation.

*See* Su at column 4, lines 11-19.

As shown above, the portion of Su that the Office Action relies on merely discloses that a determination of gain and path loss may be made at periodic intervals. Neither the Office Action, nor the Examiner's Answer explains how a general "determination" necessarily describes, teaches, or suggests that **all** of "the arranging [as recited in claim 1], taking [as recited in claim 1], configuring [as recited in claim 1], performing [as recited in claims 1], and adjusting [as recited in claim 1] occur on a periodic basis," as recited in claim 2.

Again, "[T]he Board cannot simply reach conclusions based on its own understanding or experience – or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some **concrete evidence in the record** in support of these findings." *See In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001) (emphasis added). Thus, for at least these additional reasons, the Applicants respectfully request reconsideration of the rejection of claim 2.

**D. Claim 16**

Claim 16 recites, in part, “wherein the adjusting is performed on a periodic basis.” As noted above with respect to claim 2, the cited portion of Su does not necessarily describe, teach, or suggest “wherein the adjusting [the operation of the receiver portion based upon the first signal power measurement and the second signal power measurement, wherein the adjusting comprises modifying at least one threshold related to processing of receive signal strength indicator data used in the operation of the radio frequency communication system] is performed on a periodic basis,” as recited in claim 16. Thus, for at least this additional reason, the Applicants respectfully request reconsideration of the rejection of claim 16.

**E. Claims 5 and 19**

The Examiner’s Answer still has not demonstrated that any of the cited references describes, teaches, or suggests “wherein the **adjusting** comprises calibrating at least one of a **slope** and a **fixed offset** of a **receive signal strength indicator**,” as recited in claim 5. Claim 19 recites similar limitations.

A review of the portions of Adams that the Examiner’s Answer relies on (column 11, lines 50-54 and column 13, lines 53-60) confirms as much. The Examiner’s Answer subjectively conflates a “fixed offset” to what is disclosed in these cited portions, although the Examiner’s Answer fails to provide evidence<sup>1</sup> to support such a conflation. Further, the Examiner’s Answer seemingly acknowledges that none of the cited references describe, teach, or suggest “calibrating ... a slope ...” as evidenced by the Office Action stressing “at least” and a “fixed offset.” *See* Examiner’s Answer at page 16. Thus, for at least the reasons set forth above and in the Appeal Brief at Section I.E., the Applicants respectfully request reconsideration of the rejection of claims 5 and 19.

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<sup>1</sup> For example, the Office Action simply states that “RSSI measure minus its setpoint ... is a fixed offset of a RSSI for a period of calibration” without providing any concrete evidence to support such a “finding.”

**F. Claim 22**

The Applicants respectfully request reconsideration of claim 22 for at least the reasons discussed above with respect to claim 15.

**II. The Proposed Combination Of Su, Adams, and Bednekoff Does Not Render Claims 6, 7, 20, And 21 Unpatentable**

**A. Claims 6, 7, 20, And 21**

The Applicants respectfully submit that the proposed combination does not render claims 6, 7, 20, and 21 unpatentable for at least the reasons discussed in the Appeal Brief and above with respect to claims 1 and 15.

**B. The Proposed Combination Does Not Render Claims 6 And 20 Unpatentable For Additional Reasons**

Also, claim 6 recites, in part, “wherein the adjusting comprises modifying the value of a receive signal strength indicator using an affine function.” Claim 20 recites a similar limitation.

The Office Action states that “appellant’s claims do not specify what ‘an affine function is.’” *See* Examiner’s Answer at page 17. Yet, affine is a specific type of function that one of ordinary skill in the art would understand.

Claim 6, for example, recite “modifying the value of a receive signal strength indicator using an affine function.” The Office Action has not cited anything that describes, teaches, or suggests such a limitation.

In order to maintain the rejection, however, the Examiner’s Answer subjectively defines “affine function” to reflect what is described in the cited references. *See id.* at page 17. In particular, the Examiner’s Answer states “giving the broadest reasonable interpretation on appellant’s claim language, the claim ‘affine function’ is interpreted as a coordination transformation relationship.” *See id.*

Nevertheless, just because the Office Action subjectively concludes that such a subjective definition, without any evidentiary support, is “reasonable” does not make it so. As noted above, “[T]he Board cannot simply reach conclusions based on its own understanding or experience – or on its assessment of what would be basic knowledge or common sense. Rather, the Board **must**

**point to some concrete evidence** in the record in support of these findings.” *See In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001) (emphasis added).

Additionally, “[i]f the examiner is able to render a claim obvious simply by saying it is so, neither the Board nor [the Federal Circuit] is capable of reviewing that determination. ... If there is neither record evidence nor detailed examiner reasoning, the Board should not conclude that ... claims are obvious.” *See In re Vaidyanathan*, Appeal 2009-1404 at pages 18-19 (Fed. Cir. May 19, 2010) (nonprecedential).

Notably, **none of Su, Adams, or Bednekoff even mentions the word “affine.”** Considering that none of the cited references even mention the word “affine,” it strains reason to subjectively assume that they could possibly describe, teach, or suggest an affine function. Moreover, the Office Action provides no concrete evidence that indicates that a term that is nowhere to be found in the cited references, namely “affine function,” is necessarily described in at least one of the cited references.

The Examiner’s Answer summarily concludes, however, that “affine function” is “interpreted as a coordination transformation relationship.” *See Examiner’s Answer* at page 17.

As noted in the Appeal Brief, the Office Action simply concludes that an affine function is merely a “coordination or transformation relationship,” **without any legal or factual authority to support such statement.** However, the “Federal Circuit has stated that “rejections on obviousness **cannot be sustained with mere conclusory statements**; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *See* MPEP at § 2142, citing *In re Kahn*, 441 F.3d 977, 988, 78 U.S.P.Q.2d 1329, 1336 (Fed. Cir. 2006), and *KSR International Co. v. Teleflex Inc.*, 82 U.S.P.Q.2d at 1396 (quoting Federal Circuit statement with approval (emphasis added). It clearly is not enough for an Examiner to simply conveniently create parallels between phrases and terms when none, in fact, exist. **The Office Action simply does not make it clear that an affine function is necessarily simply a “coordination or transformation relationship,” or vice versa.**

Accordingly, the Office Action has not explained how the proposed combination can possibly disclose the limitations recited in claims 6 and 20. Thus, for at least these additional reasons, the Applicants respectfully request reconsideration of the rejection of claims 6 and 20.



### **III. The Proposed Combination Does Not Render Claim 9 Unpatentable**

For at least the reasons discussed in the Appeal Brief at Section III, the Applicants respectfully request reconsideration of the rejection of claim 9.

### **IV. The Proposed Combination Does Not Render Claims 11 And 13 Unpatentable**

For at least the reasons discussed above with respect to claim 1, the Applicants respectfully request reconsideration of the rejection of claims 11 and 13.

Additionally, **claim 13** recites, in part, “wherein the relatively higher level of radio frequency signal corresponds to a signal power of **greater than approximately -30 dBm**.” The Examiner’s Answer relies on Kim 803 at column 2, lines 27-64 as disclosing this limitation. *See* Examiner’s Answer at pages 10-11.

However, this portion of Kim 803 teaches that “level of the received signal can **be detected only when an RF signal of a level corresponding to a -30 dBm through -110 dBm range** is supplied to the IF processor.” *See* Kim 803 at column 2, lines 30-33 (emphasis added). Thus, **at the signal level as recited in claim 13, Kim teaches that signal cannot be detected.** The limitation “**greater** than approximately -30 dBm (that is, above -30dBm) differs from signals **at or below** -30dBm (e.g., -30dBm through -110 dBm; -31 or -32 dBm is **less** than -30dBm).

Notably, the Office Action seems to completely disregard the recited limitations of **claim 13** in maintaining this rejection. *See* Examiner’s Answer at pages 18-19 (notably, the Office Action does not seem to specifically address the claim language, but, instead, cites to the “specification” and then draws conclusions that contradict the express teachings of Kim 803).

Thus, for at least these additional reasons, the Applicants respectfully submit that the proposed combination of Su, Adams, and Kim 803 does not render claim 13 unpatentable.

**V. CONCLUSION**

For at least the reasons discussed in the Appeal Brief and above, the Applicants respectfully submit that the pending claims are allowable. Therefore, the Board is respectfully requested to reverse the rejections of pending claims 1-7 and 9-23.

The Commissioner is authorized to charge any necessary fees, or credit overpayment to Deposit Account 13-0017.

Respectfully submitted,

Dated: September 23, 2010

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